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Summary of Emissions Results 1

TABLE 1-1
SUMMARY OF EMISSIONS RESULTS
DESERT VIEW POWER, UNIT 1
MARCH 1, 2016

Parameter	Average Emission Results	Permit Limit	Comment
Total Solid Particulate:			
gr/dscf	0.0002	--	
gr/dscf @ 12% CO_2	0.0002	0.010	Pass
lb/hr (PM_{10})	0.13	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	12.97	27	Pass
lb/hr	7.72	12	Pass
NO_x:			
ppm at 3% O_2	62.05	94	Pass
lb/hr	26.54	30	Pass
CO:			
ppm @ 3% O_2	0.12	231	Pass
lb/hr	0.03	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	3.91		
lb/hr	0.58	5.9	Pass

Note: NO_x CO and SO_2 results are from RATA Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Particulate Emissions Performance Test Unit 1

TABLE 4-1
PARTICULATE EMISSIONS PERFORMANCE TEST
DESERT VIEW POWER, UNIT 1
MARCH 1, 2016

Test No.	1-PM-U1	2-PM-U1	3-PM-U1	
Date:	3/1/2016	3/1/2016	3/1/2016	
Time:	800/1019	1031/1251	1315/1551	
O_2, %	9.1	9.1	9.1	9.1
CO_2, %	11.4	11.4	11.4	11.4
H_2O, %	13.4%	12.9%	12.5%	13.0%
Stack Temperature (°F)	350.0	356.6	358.3	355.0
Gas Flow:				
wacfm	159,546	159,230	155,798	158,191
dscfm	90,876	90,505	88,773	90,051
Isokinetic Ratio, %	98.9	101.0	101.0	100.3

Total Solid Particulate:				
Grain Loading, gr/dscf	0.00007	0.00019	0.00025	0.00017
Grain Loading @ 12% CO_2	0.00007	0.00020	0.00027	0.00018
lb/hr	0.052	0.145	0.193	0.13

Hydrocarbon Emissions Performance Test Unit 1

TABLE 4-3
HYDROCARBON EMISSIONS PERFORMANCE TEST
DESERT VIEW POWER, UNIT 1
MARCH 1, 2016

Test No.	1A-HC-U1	1B-HC-U1	Average
Date:	3/1/2016	3/1/2016	
Time:	910/1000	910/1000	
O_2, %	9.11	9.11	9.11
CO_2, %	11.39	11.39	11.39
H_2O, %	13.43%	13.43%	13.43%
Gas Flow:			
wacfm	159,546	159,546	159,546
dscfm	90,876	90,876	90,876
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	2.33	2.81	2.57
TNMHC ppm @ 3% O_2	3.54	4.27	3.91
TNMHC, lb/hr	0.53	0.64	0.58

Note: Flow rates from RATA Run 1

NOx, SOx, CO Emissions Performance Tests Unit 2

TABLE 4-15
NO_x, SO_x, & CO EMISSIONS PERFORMANCE TESTS
DESERT VIEW POWER, UNIT 2
MARCH 2, 2016

Test No. Date: Time:	1-Compliance-U2 3/2/2016 920/1020	1-Compliance-U2 3/2/2016 1211/1311	1-Compliance-U2 3/2/2016 1325/1425	Average
O_2, %	8.3	8.4	8.4	8.4
CO_2, %	12.2	12.1	12.1	12.1
H_2O, %	13.61	13.45	11.70	12.92
Stack Temperature, °F	340	344	345	343
Gas Flow:				
wacfm	151,365	154,928	151,223	152,506
dscfm	86,694	88,528	88,095	87,772
NO_x, ppm	40.7	41.0	42.1	**41.3**
NO_x, ppm @ 3% O_2	58.1	58.8	60.4	**59.07**
NO_x, lb/hr	25.30	25.98	26.56	**25.95**
CO, ppm	0.09	0.08	0.08	**0.08**
CO, ppm @ 3% O_2	0.13	0.11	0.11	**0.12**
CO, lb/hr	0.03	0.03	0.03	**0.03**
SO_x, ppm	9.32	10.38	10.31	**10.00**
SO_x, ppm @ 3% O_2	13.29	14.90	14.79	**14.32**
SO_x, lb/hr	8.05	9.16	9.05	**8.76**

Summary of Emissions Results Unit 2

TABLE 1-2
SUMMARY OF EMISSIONS RESULTS
DESERT VIEW POWER, UNIT 2
MARCH 2, 2016

Parameter	Average Emission Results	Permit Limit	Comment
Total Solid Particulate:			
gr/dscf	0.0002	--	
gr/dscf @ 12% CO_2	0.0002	0.010	Pass
lb/hr	0.16	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	14.32	27	Pass
lb/hr	8.76	12	Pass
NO_x:			
ppm at 3% O_2	59.07	94	Pass
lb/hr	25.95	30	Pass
CO:			
ppm @ 3% O_2	0.12	231	Pass
lb/hr	0.03	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	7.09		
lb/hr	1.08	5.9	Pass

Note: NO_x CO and SO_2 results are from RATA Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

NOx, CO, SOx Emissions Performance Tests Unit 1

TABLE 4-2
NO_x, CO, SO_x EMISSIONS PERFORMANCE TESTS
DESERT VIEW POWER, UNIT 1
MARCH 1, 2016

Test No.	1-Compliance -U1	2-Compliance-U1	3-Compliance-U1	
Date:	3/1/2016	3/1/2016	3/1/2016	
Time:	800/900	915/1015	1031/1131	Average
O_2, %	9.1	9.2	9.0	9.1
CO_2, %	11.5	11.3	11.5	11.4
H_2O, %	13.01	13.56	12.98	13.19
Stack Temperature, °F	350	351	354	352
Gas Flow:				
wacfm	160,291	160,427	155,662	158,794
dscfm	91,788	91,146	88,698	90,544
NO_x, ppm	40.8	40.4	41.6	**40.9**
NO_x, ppm @ 3% O_2	61.6	61.8	62.7	**62.05**
NO_x, lb/hr	26.82	26.40	26.40	**26.54**
CO, ppm	0.09	0.07	0.07	**0.08**
CO, ppm @ 3% O_2	0.14	0.10	0.11	**0.12**

CO, ppm @ 3% O_2				
CO, lb/hr	0.04	0.03	0.03	**0.03**
SO_x, ppm	8.85	7.64	9.19	**8.56**
SO_x, ppm @ 3% O_2	13.37	11.67	13.87	**12.97**
SO_x, lb/hr	8.09	6.94	8.12	**7.72**

Particulate Emissions Performance Tests Unit 2

TABLE 4-14
PARTICULATE EMISSIONS PERFORMANCE TESTS
DESERT VIEW POWER, UNIT 2
MARCH 2, 2016

Test No.	1-PM-U2	2-PM-U2	3-PM-U2	
Date:	3/2/2016	3/2/2016	3/2/2016	
Time:	835/1045	1103/1323	1336/1546	
O_2, %	8.4	8.5	8.5	8.5
CO_2, %	12.1	12.1	12.0	12.1
H_2O, %	13.5%	12.1%	11.8%	12.5%
Stack Temperature, °F	342.1	344.9	352.2	346.4
Gas Flow:				
wacfm	151,892	151,964	152,407	152,088
dscfm	87,013	88,131	87,840	87,661
Isokinetic Ratio, %	97.4	97.4	102.0	99.0
Total Solid Particulate:				
Grain Loading gr/dscf	0.00018	0.00033	0.00014	0.00022
Grain Loading @ 12% CO_2	0.00018	0.00033	0.00014	0.00022
lb/hr	0.136	0.253	0.104	0.164

Hydrocarbon Emissions Performance Test Unit 2

TABLE 4-16
HYDROCARBON EMISSIONS PERFORMANCE TEST
DESERT VIEW POWER, UNIT 2
MARCH 2, 2016

Test No.	1A-HC-U2	1B-HC-U2	Average
Date:	3/2/2016	3/2/2016	
Time:	1020/1100	1020/1100	
O_2, %	8.37	8.37	8.37
CO_2, %	12.13	12.13	12.13
H_2O, %	13.47%	13.47%	13.47%
Gas Flow:			
wacfm	151,892	151,892	151,892
dscfm	87,013	87,013	87,013
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	4.96	2.68	3.82
TNMHC ppm @ 3% O_2	7.09	3.83	5.46
TNMHC, lb/hr	1.08	0.58	0.83

Note: Flow rates from RATA Run 1, the higher of the two runs was used to demonstrate compliance since the difference of the individual results was >20% of the average result per SCAQMD Method 25.3

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HCL Test Results

TABLE 1-1
HYDROCHLORIC ACID TEST RESULTS
DESERT VIEW POWER UNIT 1
APRIL 11, 2016

Test Number	5-HCL-Unit 1	6-HCL-Unit 1	7-HCL-Unit 1	Average	Limit
Date	05/11/16	05/11/16	05/11/16		
Start/Stop Time	815/1027	1040/1251	1413/1625		
Stack Flow Rate, dscfm	85,045	85,020	83,885	84,650	
Sample Volume, dscf	85.722	86.294	84.893	85.636	
O_2, %	8.69	8.68	8.61	8.66	
CO_2, %	11.74	11.75	11.78	11.76	
mg/sample	18.70	17.30	26.70	20.90	
mg/dscm	7.703	7.079	11.105	8.629	
ppm (as HCl)	5.001	4.596	7.211	5.603	
lb/hr (as HCl)	2.4519	2.2526	3.4867	2.7304	
MMBtu/Hr	370	370	370	370	
lb/MMBtu	0.007	0.006	0.009	0.007	0.022

TABLE 1-2
HYDROCHLORIC ACID TEST RESULTS
DESERT VIEW POWER UNIT 2
APRIL 10, 2016

Test Number	2-HCL-Unit 2	3-HCL-Unit 2	4-HCL-Unit 2	Average	Limit
Date	05/10/16	05/10/16	05/10/16		
Start/Stop Time	1059/1309	1328/1540	1615/1825		
Stack Flow Rate, dscfm	89,128	88,085	88,614	88,609	
Sample Volume, dscf	92.055	92.707	90.242	91.668	
O_2, %	8.73	8.67	8.69	8.69	
CO_2, %	11.80	11.77	11.76	11.78	
mg/sample	44.40	57.80	46.70	49.63	
mg/dscm	17.031	22.015	18.273	19.106	
ppm (as HCl)	11.058	14.294	11.865	12.405	
lb/hr (as HCl)	5.6813	7.2579	6.0605	6.3332	
MMBtu/Hr	360	360	360	360	
lb/MMBtu	0.016	0.020	0.017	0.018	0.022

Note: Test 1 was not used, due to the loss of biomass fuel flow.

HCL Test Results (Unit 2)

TABLE 4-2
HYDROCHLORIC ACID TEST RESULTS
DESERT VIEW POWER UNIT 2
APRIL 10, 2016

Client: Desert View Power
Location: Mecca
Unit: 2
Parameter: Full Load
Fuel: Biomass
Data By: DW

Test Number:	1-HCL-Unit 2	2-HCL-Unit 2	3-HCL-Unit 2	4-HCL-Unit 2	Average
Reference Temperature, °F	68	68	68	68	
Test Date	5/10/2016	5/10/2016	5/10/2016	42500	
Sample Train	19-WCS	19-WCS	19-WCS	19-WCS	-
Pitot Factor	0.840	0.840	0.840	0.840	-
Meter Calibration Factor	1.002	1.002	1.002	1.002	-
Stack Area (sq ft)	38.84	38.84	38.84	38.84	-
Sample Time (Min)	120	120	120	120	120
Barometric Pressure (in Hg)	29.97	29.97	29.97	29.97	29.97
Nozzle Diameter (in)	0.246	0.246	0.246	0.246	0.246
Start/Stop Time	830/1043	1059/1309	1328/1540	1615/1825	-
Stack Pressure (inw)	0.82	0.82	0.82	0.82	0.82

Stack Pressure (iwg)	0.82	0.82	0.82	0.82	0.82
Delta P (iwg)	0.919	0.9341	0.9246	0.9306	0.9260
Meter Pressure (iwg)	1.847	2.140	2.133	2.060	2.040
Stack Temperature (°F)	334.4	340.3	346.7	348.5	340.5
Meter Temperature (°F)	83.3	92.8	95.4	99.7	90.5
Meter Volume (acf)	86.454	95.535	96.669	94.852	92.886
Liquid Volume (ml)	279.8	309.4	319.5	300.4	302.9
Stack O_2 (%)	9.01	8.73	8.67	8.69	8.8
Stack CO_2 (%)	11.46	11.80	11.77	11.76	11.7
Standard Sample Volume (SCF)	84.690	92.055	92.707	90.242	89.817
Moisture Fraction	0.135	0.137	0.140	0.136	0.137
Molecular Weight (wet)	28.55	28.56	28.52	28.57	28.54
Stack Gas Velocity (ft/sec)	66.18	66.94	66.91	67.15	66.68
Stack Flow Rate (wacfm)	154,234	156,006	155,939	156,490	155,393
Stack Flow Rate (dscfm)	88,978	89,128	88,085	88,614	88,730
Isokinetic Ratio (%)	93.30	101.25	103.17	99.83	99.24
mg/sample	38.70	44.40	57.80	46.70	49.63
mg/dscm	16.135	17.031	22.015	18.273	19.106
ppm (as HCl)	10.477	11.058	14.294	11.865	12.405
lb/hr (as HCl)	5.3735	5.6813	7.2579	6.0605	6.3332
MMBtu/Hr	360	360	360	360	360
lb/MMBtu	0.015	0.016	0.020	0.017	0.018

Note: Test number 1 was not used due to the boiler losing biomass fuel during the test for a short time. The average value excludes run 1.

HCL Test Results (Unit 1)

TABLE 4-1
HYDROCHLORIC ACID TEST RESULTS
DESERT VIEW POWER UNIT 1
APRIL 11, 2016

Client: Desert View Power
Location: Mecca
Unit: 1

Parameter: Full Load
Fuel: Biomass
Data By: DW

Test Number:	5-HCl-Unit 1	6-HCl-Unit 1	7-HCl-Unit 1	Average
Reference Temperature, °F	68	68	68	
Test Date	5/11/2016	5/11/2016	5/11/2016	
Sample Train	19-WCS	19-WCS	19-WCS	-
Pitot Factor	0.840	0.840	0.840	-
Meter Calibration Factor	1.002	1.002	1.002	-
Stack Area (sq ft)	38.84	38.84	38.84	-
Sample Time (Min)	120	120	120	120
Barometric Pressure (in Hg)	30.01	30.01	30.01	30.01
Nozzle Diameter (in)	0.246	0.246	0.246	0.246
Start/Stop Time	815/1027	1040/1251	1413/1625	-
Stack Pressure (iwg)	0.74	0.74	0.74	0.74
Delta P (iwg)	0.823	0.8325	0.8215	0.8258
Meter Pressure (iwg)	1.830	1.847	1.836	1.838
Stack Temperature (°F)	331.3	335.9	342.8	336.7
Meter Temperature (°F)	90.7	97.7	99.4	95.9
Meter Volume (acf)	88.582	90.300	89.100	89.327
Liquid Volume (ml)	263.1	272.3	274.0	269.8
Stack O_2 (%)	8.69	8.68	8.61	8.7
Stack CO_2 (%)	11.74	11.75	11.78	11.8
Standard Sample Volume (SCF)	85.722	86.294	84.893	85.636
Moisture Fraction	0.127	0.130	0.132	0.129
Molecular Weight (wet)	28.68	28.64	28.61	28.64
Stack Gas Velocity (ft/sec)	62.34	62.90	62.78	62.67
Stack Flow Rate (wacfm)	145,270	146,584	146,308	146,054
Stack Flow Rate (dscfm)	85,045	85,020	83,885	84,650
Isokinetic Ratio (%)	98.81	99.50	99.21	99.17
mg/sample	18.70	17.30	26.70	20.90
mg/dscm	7.703	7.079	11.105	8.629
ppm (as HCl)	5.001	4.596	7.211	5.603
lb/hr (as HCl)	2.4519	2.2526	3.4867	2.7304
MMBtu/Hr	370	370	370	370
lb/MMBtu	0.0066	0.0061	0.0094	0.0074

Results

4.0 RESULTS

This section presents the results of the performance tests conducted at Desert View Power, during March of 2016. Test results are presented in the following sections:

4.1 HCl Performance Tests and Results

4.2 Fuel Analysis Results

The test plan that was submitted is contained in Appendix A and quality assurance information in Appendix B. All supporting data sheets and plant data are included in Appendix C. Emissions calculations are presented in Appendix D. Laboratory reports are contained in Appendix E, and Delta instrument strip charts are in Appendix F. Chain of custody records are included in Appendix G.

4.1 HCL PERFORMANCE TEST RESULTS

Total HCl emissions for Unit 1 were 0.007 lb/MMBtu. The results are presented in Table 4-1. This is below the permit limit of 0.022 lb/MMBtu.

Total HCl emissions for Unit 2 were 0.018 lb/MMBtu. The results are presented in Table 4-2. This is below the permit limit of 0.022 lb/MMBtu.

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Mercury Test Results (Unit 1)

TABLE 1-2
MERCURY TEST RESULTS
DESERT VIEW POWER UNIT 1
MAY 11, 2016

Test Number	4-HG-Unit 1	5-HG-Unit 1	6-HG-Unit 1	Average	Limit
Date	05/11/16	05/11/16	05/11/16		
Start/Stop Time	815/1125	1155/1459	1529/1839		
Stack Flow Rate, dscfm[1]	84,519	84,219	83,403	83,811	
Sample Volume, dscf	127.756	131.702	127.309	129.506	
O_2, %	8.71	8.67	8.65	8.66	
CO_2, %	11.78	11.83	11.86	11.84	
Sample Fractions	µg/fraction	µg/fraction	µg/fraction		
Front 1/2	0.1	0.1	0.1		
HCL	0.036	0.093	0.055		
Back	26	42	7.8		
Empty	0.12	0.074	0.15		
KMnO4	0.59	0.43	0.6		
µg/sample	26.85	42.70	8.71	25.70	
µg/dscm	7.420	11.447	2.414	6.931	
lb/hr (as HG)	0.002347	0.0036	0.0008	0.0022	
MMBtu/Hr	370	370	370	370	
lb/MMBtu	6.344×10^{-6}	9.752×10^{-6}	2.037×10^{-6}	6.044×10^{-6}	5.700×10^{-6}

Mercury Test Results (Unit 1)

TABLE 4-1
MERCURY TEST RESULTS
DESERT VIEW POWER UNIT 1
MAY 11, 2016

Client: Desert View Power
Location: Mecca
Unit: 1
Parameter: Full Load
Fuel: Biomass
Data By: DW

Test Number:	4-HG-Unit 1	5-HG-Unit 1	6-HG-Unit 1	Average
Reference Temperature, °F	68	68	68	
Test Date	5/11/2016	5/11/2016	5/11/2016	
Sample Train	5-WCS	5-WCS	5-WCS	-
Pitot Factor	0.840	0.840	0.840	-
Meter Calibration Factor	0.997	1/0/1900	1/0/1900	-
Stack Area (ft^2)	38.84	38.84	38.84	-
Sample Time (Min)	180	180	180	180

Barometric Pressure (in Hg)	30.01	30.01	30.01	30.01
Nozzle Diameter (inches)	0.245	0.249	0.245	0.246
Start/Stop Time	815/1125	1155/1459	1529/1839	-
Stack Pressure (iwg)	0.74	0.74	0.74	0.74
Delta P (iwg)	0.829	0.8348	0.8412	0.8350
Meter Pressure (iwg)	1.760	1.867	1.798	1.808
Stack Temperature (°F)	344.2	343.5	357.6	348.5
Meter Temperature (°F)	102.0	109.3	113.0	108.1
Meter Volume (acf)	135.430	141.378	137.585	138.131
Liquid Volume (ml)	397.2	438.8	442.7	426.2
Stack O_2 (%)	8.71	8.67	8.65	8.7
Stack CO_2 (%)	11.78	11.83	11.86	11.8
Standard Sample Volume (SCF)	127.756	131.702	127.309	128.922
Moisture Fraction	0.128	0.136	0.141	0.135
Molecular Weight (wet)	28.67	28.58	28.52	28.59
Stack Gas Velocity (ft/sec)	63.06	63.36	64.22	63.55
Stack Flow Rate (wacfm)	146,966	147,658	149,670	148,098
Stack Flow Rate (dscfm)	84,519	84,219	83,403	84,047
Isokinetic Ratio (%)	99.59	99.75	100.57	99.97

Results / HG Performance Test Results

4.0 RESULTS

This section presents the results of the performance tests conducted at Desert View Power, during March of 2016. Test results are presented in the following sections:

4.1 Hg Performance Tests and Results

4.2 Fuel Analysis Results

The test plan that was submitted is contained in Appendix A and quality assurance information in Appendix B. All supporting data sheets and plant data are included in Appendix C. Emissions calculations are presented in Appendix D. Laboratory reports are contained in Appendix E, and Delta instrument strip charts are in Appendix F. Chain of custody records are included in Appendix G.

4.1 HG PERFORMANCE TEST RESULTS

Total Hg emissions for Unit 1 were 6.044 x 10^{-6} lb/MMBtu. The results are presented in Table 4-1. This is greater than the permit limit of 5.700E-06 lb/MMBtu.

Total Hg emissions for Unit 2 were 1.259 x 10^{-5} lb/MMBtu. The results are presented in Table 4-2. This is greater than the permit limit of 5.700E-06 lb/MMBtu.

Mercury Test Results (Unit 2)

TABLE 1-2
MERCURY TEST RESULTS
DESERT VIEW POWER UNIT 2
MAY 10, 2016

Test Number	1-HG-Unit 2	2-HG-Unit 2	3-HG-Unit 2	Average	Limit
Date	05/10/16	05/10/16	05/10/16		
Start/Stop Time	830/1150	1231/1309	1615/1933		
Stack Flow Rate, dscfm[1]	88,267	87,906	88,063	87,984	
Sample Volume, dscf	137.495	136.706	139.367	138.037	
O_2, %	8.91	8.66	8.67	8.66	
CO_2, %	11.54	11.79	11.78	11.78	
Sample Fractions	µg/fraction	µg/fraction	µg/fraction		
Front 1/2	0.1	0.1	0.1		
HCL	0.027	0.39	0.13		
Back	54	51	51		
Empty	0.22	2	0.2		
KMnO4	0.58	0.64	0.52		
µg/sample	54.93	54.13	51.95	53.04	
µg/dscm	14.106	13.981	13.162	13.572	
lb/hr (as HG)	0.0047	0.0046	0.0043	0.0045	
MMBtu/Hr	360	360	360	360	
Lb/MMBtu	1.294×10^{-5}	1.278×10^{-5}	1.205×10^{-5}	1.259×10^{-5}	5.700×10^{-6}

Mercury Test Results (Unit 2)

TABLE 4-2
MERCURY TEST RESULTS
DESERT VIEW POWER UNIT 2
MAY 10, 2016

Client: Desert View Power
Location: Mecca
Unit: 2

Parameter: Full Load
Fuel: Biomass
Data By: DW

Test Number:	1-HG-Unit 2	2-HG-Unit 2	3-HG-Unit 2	Average
Reference Temperature, °F	68	68	68	
Test Date	5/10/2016	5/10/2016	5/10/2016	
Sample Train	5-WCS	5-WCS	5-WCS	-
Pitot Factor	0.840	0.840	0.840	-
Meter Calibration Factor	0.997	1/0/1900	1/0/1900	-
Stack Area (ft^2)	38.84	38.84	38.84	-
Sample Time (Min)	180	180	180	180

Barometric Pressure (in Hg)	29.97	29.97	29.97	29.97
Nozzle Diameter (inches)	0.249	0.245	0.249	0.248
Start/Stop Time	830/1150	1231/1309	1615/1933	-
Stack Pressure (iwg)	0.82	0.82	0.82	0.82
Delta P (iwg)	0.916	0.9347	0.9305	0.9271
Meter Pressure (iwg)	2.020	2.047	2.150	2.072
Stack Temperature (°F)	346.6	360.1	351.9	352.9
Meter Temperature (°F)	94.7	105.1	109.4	103.0
Meter Volume (acf)	143.952	145.792	149.719	146.488
Liquid Volume (ml)	448.6	467.7	481.1	465.8
Stack O_2 (%)	8.91	8.66	8.67	8.7
Stack CO_2 (%)	11.54	11.79	11.78	11.7
Standard Sample Volume (SCF)	137.495	136.706	139.367	137.856
Moisture Fraction	0.133	0.139	0.140	0.138
Molecular Weight (wet)	28.57	28.53	28.52	28.54
Stack Gas Velocity (ft/sec)	66.54	67.82	67.35	67.24
Stack Flow Rate (wacfm)	155,077	158,053	156,948	156,693
Stack Flow Rate (dscfm)	88,267	87,906	88,063	88,078
Isokinetic Ratio (%)	99.36	102.46	100.95	100.92

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Summary of Emissions Results Unit 1

TABLE 1-1
SUMMARY OF EMISSIONS RESULTS
DESERT VIEW POWER, UNIT 1
MARCH 28 AND APRIL 14, 2017

Parameter	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	19.45		
lb/hr (as HCl)	6.36		
lb/MMBtu	0.018	0.022	Pass
Total Solid Particulate:			
gr/dscf	0.0021	--	
gr/dscf @ 12% CO_2	0.0021	0.010	Pass
lb/hr (PM_{10})	1.56	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	12.20	27	Pass
lb/hr	8.13	12	Pass
NO_x:			
ppm at 3% O_2	60.20	94	Pass
lb/hr	28.84	30	Pass
CO:			
ppm @ 3% O_2	0	231	Pass
lb/hr	0	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	5.68		
lb/hr	0.96	5.9	Pass

Note: NO_x CO and SO_2 results are from RATA Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Hydrochloric Acid Test Results

TABLE 4-1
HYDROCHLORIC ACID TEST RESULTS
DESERT VIEW POWER UNIT 1
MARCH 28, 2016

Test Number	1-HCL-U1	2-HCL-U1	3-HCL-U1	**Average**	Limit
Date	03/28/2017	03/28/2017	03/28/2017		
Start/Stop Time	845/1115	1203/1428	1450/1655		
Stack Flow Rate, dscfm	88,750	87,633	86,166	87,516	
Sample Volume, dscf	84.981	87.955	84.976	85.971	
O_2, %	7.22	7.29	7.12	7.21	
CO_2, %	13.31	13.21	13.39	13.30	
mg/sample	38.2	44.5	59.2	47.3	
mg/dscm	15.872	17.865	24.599	19.445	
ppm (as HCl)	10.463	11.777	16.216	12.819	
lb/hr (as HCl)	5.2724	5.8595	7.9334	6.3551	
MMBtu/Hr	361	361	361	361	
lb/MMBtu	0.015	0.016	0.022	0.018	0.022

NOx, CO, SOx, Emissions Performance Tests Unit 1

TABLE 4-3
NO_x, CO, SO_x EMISSIONS PERFORMANCE TESTS
DESERT VIEW POWER, UNIT 1
MARCH 28, 2017

Test No. Data From: Date: Time:	1-Compliance -U1 1-RA-U1 3/28/2017 8:45	2-Compliance-U1 2-RA-U1 3/28/2017 10:05	3-Compliance-U1 3-RA-U1 3/28/2017 12:03	Average
O_2, %	7.3	7.2	7.3	7.3
CO_2, %	13.3	13.4	13.3	13.3
H_2O, %	12.76	13.26	13.31	13.11
Stack Temperature, °F	335	339	343	339
Gas Flow:				
wacfm	150,739	151,706	152,203	151,549
dscfm	88,065	87,655	87,459	87,726
NO_x, ppm	46.6	46.6	44.5	**45.9**
NO_x, ppm @ 3% O_2	61.3	60.9	58.5	**60.20**
NO_x, lb/hr	29.40	29.24	27.89	**28.84**
CO, ppm	-0.33	-0.32	-0.36	**-0.33**
CO, ppm @ 3% O_2	-0.43	-0.42	-0.47	**-0.44**
CO, lb/hr	-0.13	-0.12	-0.14	**-0.13**
SO_x, ppm	9.56	9.05	9.30	**9.30**
SO_x, ppm @ 3% O_2	12.57	11.82	12.22	**12.20**
SO_x, lb/hr	8.39	7.90	8.11	**8.13**

Hydrochloric Acid Test Results Unit 2

TABLE 4-15
HYDROCHLORIC ACID TEST RESULTS
DESERT VIEW POWER UNIT 2
MARCH 29, 2017

Test Number	1-HCL-U2	2-HCL-U2	3-HCL-U2	Average	Limit
Date	03/29/17	03/29/17	03/29/17		

Start/Stop Time	830/1049	1210/1432	1455/1715		
Stack Flow Rate, dscfm	86,460	86,259	86,561	86,427	
Sample Volume, dscf	86.074	85.686	84.346	85.369	
O_2, %	7.70	7.68	7.59	7.65	
CO_2, %	12.92	12.72	12.92	12.85	
mg/sample	20.5	32.4	42.5	31.8000	
mg/dscm	8.410	13.352	17.792	13.184	
ppm (as HCl)	5.544	8.802	11.729	8.691	
lb/hr (as HCl)	2.7214	4.3105	5.7643	4.2654	
MMBtu/Hr	392	392	392	392	
lb/MMBtu	0.007	0.011	0.015	0.011	0.022

NOx, CO, SOx, Emissions Performance Tests Unit 2

TABLE 4-17
NO_x, SO_x, & CO EMISSIONS PERFORMANCE TESTS
DESERT VIEW POWER, UNIT 2
MARCH 29, 2017

Test No.	1-Compliance-U2	2-Compliance-U2	3-Compliance-U2	
Data From:	3-RA-U2	4-RA-U2	5-RA-U2	
Date:	3/29/2017	3/29/2017	3/29/2017	
Time:	12:10	13:30	14:55	Average
O_2, %	7.7	7.8	7.8	7.7
CO_2, %	12.9	12.7	12.8	12.8
H_2O, %	13.11	13.69	13.33	13.38
Stack Temperature, °F	329	337	339	335
Gas Flow:				
wacfm	149,172	148,928	150,757	149,619
dscfm	87,388	85,785	86,988	86,720
NO_x, ppm	38.4	38.0	38.9	**38.4**
NO_x, ppm @ 3% O_2	51.9	51.8	53.0	**52.22**
NO_x, lb/hr	24.01	23.36	24.23	**23.87**
CO, ppm	-0.33	-0.31	-0.38	**-0.34**
CO, ppm @ 3% O_2	-0.45	-0.42	-0.52	**-0.46**
CO, lb/hr	-0.13	-0.11	-0.15	**-0.13**
SO_x, ppm	9.82	7.34	11.19	**9.45**
SO_x, ppm @ 3% O_2	13.28	10.00	15.25	**12.85**
SO_x, lb/hr	8.55	6.27	9.70	**8.18**

Results are from RATA runs 3, 4 and 5

Summary of Emissions Results Unit 2

TABLE 1-2
SUMMARY OF EMISSIONS RESULTS
DESERT VIEW POWER, UNIT 2
MARCH 29, 2017

Parameter	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	13.18		
lb/hr (as HCl)	4.27		
lb/MMBtu	0.011	0.022	Pass
Total Solid Particulate:			
gr/dscf	0.0021	--	
gr/dscf @ 12% CO_2	0.0020	0.010	Pass
lb/hr	1.55	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	12.85	27	Pass
lb/hr	8.18	12	Pass
NO_x:			
ppm at 3% O_2	52.22	94	Pass
lb/hr	23.87	30	Pass
CO:			
ppm @ 3% O_2	0	231	Pass
lb/hr	0	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	4.68		
lb/hr	0.74	5.9	Pass

Note: NO_x CO and SO_2 results are from RATA Runs 3, 4 and 5. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Particulate Emissions Performance Test Unit 1

TABLE 4-2
PARTICULATE EMISSIONS PERFORMANCE TEST
DESERT VIEW POWER, UNIT 1
APRIL 14, 2017

Test No.	1-PM-U1	2-PM-U1	3-PM-U1	
Date:	4/14/2017	4/14/2017	4/14/2017	
Time:	709/915	933/1139	1155/1402	
O_2, %	8.4	8.6	8.7	8.6
CO_2, %	11.9	11.9	11.8	11.9
H_2O, %	12.3%	12.1%	12.1%	12.2%
Stack Temperature (°F)	347.1	339.3	342.7	343.0
Gas Flow:				
wacfm	149,841	150,964	151,429	150,745
dscfm	86,298	87,960	87,844	87,367
Isokinetic Ratio, %	100.4	99.0	99.2	99.5
Total Solid Particulate:				
Grain Loading, gr/dscf	0.0018	0.0022	0.0023	0.0021
Grain Loading @ 12% CO_2	0.0018	0.0022	0.0023	0.0021
lb/hr	1.33	1.64	1.70	1.56

Hydrocarbon Emissions Performance Test Unit 1

TABLE 4-4
HYDROCARBON EMISSIONS PERFORMANCE TEST
DESERT VIEW POWER, UNIT 1
MARCH 28, 2017

Test No.	1A-HC-U1	1B-HC-U1	Average
Date:	3/28/2017	3/28/2017	
Time:	854/946	854/946	
O_2, %	7.22	7.22	7.22
CO_2, %	13.31	13.31	13.31
H_2O, %	13.41%	13.41%	13.41%
Gas Flow:			
wacfm	153,397	153,397	153,397
dscfm	88,750	88,750	88,750
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	4.06	4.62	4.34
TNMHC ppm @ 3% O_2	5.31	6.04	5.68
TNMHC, lb/hr	0.90	1.02	0.96

Note: Flow rates from HCL Run 1

Particulate Emissions Performance Test Unit 2

TABLE 4-16
PARTICULATE EMISSIONS PERFORMANCE TESTS
DESERT VIEW POWER, UNIT 2
MARCH 29, 2017

Test No.	1-PM-U2	2-PM-U2	3-PM-U2
Date:	3/29/2017	3/29/2017	3/29/2017
Time:	830/1049	1210/1432	1455/1710

O_2, %	7.7	7.7	7.6	7.7
CO_2, %	12.9	12.7	12.9	12.9
H_2O, %	14.3%	13.9%	13.8%	14.0%
Stack Temperature, °F	322.1	333.6	338.9	331.5
Gas Flow:				
wacfm	148,087	149,945	149,516	149,182
dscfm	86,262	86,514	85,966	86,247
Isokinetic Ratio, %	101.7	101.8	101.2	101.6
Total Solid Particulate:				
Grain Loading gr/dscf	0.0020	0.0023	0.0020	0.0021
Grain Loading @ 12% CO_2	0.0019	0.0021	0.0019	0.0020
lb/hr	1.50	1.67	1.47	1.55

Hydrocarbon Emissions Performance Test Unit 2

TABLE 4-18
HYDROCARBON EMISSIONS PERFORMANCE TEST
DESERT VIEW POWER, UNIT 2
MARCH 29, 2017

Test No. Date: Time:	1A-HC-U2 3/29/2017 935/1018	1B-HC-U2 3/29/2017 935/1018	Average
O_2, %	7.70	7.70	7.70
CO_2, %	12.92	12.92	12.92
H_2O, %	14.30%	14.30%	14.30%
Gas Flow:			
wacfm	148,087	148,087	148,087
dscfm	86,262	86,262	86,262
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	4.31	2.60	3.45
TNMHC ppm @ 3% O_2	5.85	3.52	4.68
TNMHC, lb/hr	**0.93**	0.56	0.74

Note: Flow rates from PM Run 1, the higher of the two runs was used to demonstrate compliance since the difference of the individual results was >20% of the average result per SCAQMD Method 25.3

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Summary of Emissions Results Unit 1

TABLE 1-1
SUMMARY OF EMISSIONS RESULTS UNIT 1
DESERT VIEW POWER
MARCH 29, 30 AND 31, 2018

Parameter	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	22.48		
lb/hr (as HCl)	8.19		
lb/MMBtu	0.0208	0.022	Pass
Total Solid Particulate:			
gr/dscf	0.0022	--	
gr/dscf @ 12% CO_2	0.0022	0.010	Pass
lb/hr (PM_{10})	1.79	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	15.57	27	Pass
lb/hr	9.77	12	Pass
NO_x:			
ppm at 3% O_2	56.49	94	Pass
lb/hr	25.46	30	Pass
CO:			
ppm @ 3% O_2	0.08	231	Pass
lb/hr	0.02	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	3.11		
lb/hr	0.50	5.9	Pass

Note: NO_x CO and SO_2 results are from RATA Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Hydrochloric Acid Tests Results Unit 1

4.0 RESULTS

This section presents the results of the performance tests conducted at Desert View Power, during March of 2018. Test results are presented in the following sections:

4.1 Unit 1 Performance Tests and RATA Results
4.2 Unit 2 Performance Tests and RATA Results
4.3 Fuel Analysis Results

All supporting data sheets, CEM data, instrument strip charts, and plant data are included in Appendix A. Laboratory reports and sample chain of custody records are contained in Appendix B. Emissions and Load calculations are presented in Appendix C. Quality assurance information is contained in Appendix D. The test plan that was submitted and is contained in Appendix E.

4.1 UNIT 1 PERFORMANCE TESTS AND RATA RESULTS

The results of the HCL testing are presented in Table 4-1. HCL emissions for Unit 1 were 0.0208 lb/MMBtu. This is below the permit limit of 0.022 lb/MMBtu. The results of the total solid particulate testing are presented in Table 4-2. Total solid particulate emissions for Unit 1 were 1.79 lb/hr. This is below the permit limit of 3.9 lb/hr. Gaseous emissions results are presented in Tables 4-3, and 4-4. NO_x, CO, SO_2 and hydrocarbon emissions results were below established permit limits. Results from the hydrocarbon tests can be found in Appendix C.1.5.1 and C.1.5.2.

Tables 4-5 through 4-14 present the CEMS RATA for Unit 1. The results demonstrate that the CEMS for Unit 1 is in control as defined in CFR 40 Appendix F. The results of the RATA are presented in units of ppm dry, ppm @ 3% O_2, and lb/hr for NO_x, CO and SO_2. O_2 results are presented in concentration units of %.

TABLE 4-1
HYDROCHLORIC ACID TEST RESULTS UNIT 1

DESERT VIEW POWER
MARCH 29, 2016

Test Number	1-HCL-U1	2-HCL-U1	3-HCL-U1	Average	Limit
Date	03/29/2018	03/29/2018	03/29/2018		
Start/Stop Time	945/1208	1236/1504	1600/1810		
Stack Flow Rate, dscfm	97,064	97,144	97,691	97,300	
Sample Volume, dscf	94.991	93.233	93.661	93.962	
O_2, %	9.09	8.93	9.12	9.04	
CO_2, %	11.34	11.57	11.39	11.43	
mg/sample	55.5	63.2	60.7	59.8	
mg/dscm	20.631	23.936	22.884	22.483	
ppm (as HCl)	13.600	15.779	15.085	14.821	
lb/hr (as HCl)	7.4949	8.7028	8.3672	8.1883	
MMBtu/Hr	393	393	393	393	
lb/MMBtu	0.019	0.022	0.021	0.0208	0.022

NOx, CO, SOx, Emissions Performance Tests Unit 1

TABLE 4-3
NO_x, CO, SO_x EMISSIONS PERFORMANCE TESTS UNIT 1
DESERT VIEW POWER
MARCH 30, 2018

Data From:	1-RA-U1	2-RA-U1	3-RA-U1
Date:	3/30/2018	3/30/2018	3/30/2018
Time:	14:55	15:38	16:22

Test No.	1-Compliance -U1	2-Compliance-U1	3-Compliance-U1	Average
O_2, %	8.4	8.4	8.5	8.5
CO_2, %	12.1	12.2	12.0	12.1
H_2O, %	12.4	12.7	12.3	12.5
Stack Temperature, °F	350	352	353	351.6
Gas Flow:				
wacfm	160,954	154,708	159,335	158,332
dscfm	92,375	88,269	91,193	90,612
NO_x ppm	37.96	38.87	40.84	**39.22**
NO_x ppm @ 3% O_2	54.54	55.84	59.10	**56.49**
NO_x lb/hr	25.12	24.58	26.68	**25.46**
CO ppm	0.04	0.09	0.04	**0.06**
CO ppm @ 3% O_2	0.06	0.14	0.05	**0.08**
CO lb/hr	0.02	0.04	0.01	**0.02**
SO_x ppm	9.9	9.4	13.1	**10.81**
SO_x ppm @ 3% O_2	14.2	13.6	18.9	**15.57**
SO_x lb/hr	9.11	8.31	11.88	**9.77**

Hydrochlroic Acid Tests Results Unit 2

4.2 UNIT 2 PERFORMANCE TESTS AND RATA RESULTS

The results of the HCL testing are presented in Table 4-15. HCL emissions for Unit 1 were 0.0206 lb/MMBtu. This is below the permit limit of 0.022 lb/MMBtu. The results of the total solid particulate testing are presented in Table 4-16. Total solid particulate emissions for Unit 2 were 0.13 lb/hr. This is below the permit limit of 3.9 lb/hr. Gaseous emissions results are presented in Tables 4-17, and 4-18. NO_x, CO, SO_2 and hydrocarbon emissions results were also below established permit limits.

Tables 4-19 through 4-28 present the CEMS RATA results for Unit 2. The results demonstrate that the CEMS for Unit 2 is in control as defined in CFR 40 Appendix F. The results of the RATA are presented in units of ppm dry, ppm @ 3% O_2 and lb/hr for NO_x, CO and SO_2. O_2 results are presented in concentration units of %.

TABLE 4-15
HYDROCHLORIC ACID TEST RESULTS UNIT 2
DESERT VIEW POWER
MARCH 27, 2016

Test Number	1-HCL-U2	2-HCL-U2	3-HCL-U2	Average	Limit
Date	03/27/2018	03/27/2018	03/27/2018		
Start/Stop Time	830/1104	1132/1404	801/1037		
Stack Flow Rate, dscfm	90,088	96,914	95,236	94,079	
Sample Volume, dscf	90.585	93.573	93.302	92.487	
O_2, %	8.49	8.50	8.36	8.45	
CO_2, %	12.07	12.10	12.31	12.16	
mg/sample	59.0	66.7	52.8	59.5000	
mg/dscm	22.998	25.169	19.982	22.717	
ppm (as HCl)	15.161	16.592	13.173	14.975	
lb/hr (as HCl)	7.7546	9.1297	7.1226	8.0023	
MMBtu/Hr	389	389	389	389	
lb/MMBtu	0.020	0.023	0.018	0.0206	0.022

NOx, CO, SOx, Emissions Performance Tests Unit 2

TABLE 4-17
NO_x, CO, SO_x EMISSIONS PERFORMANCE TESTS UNIT 2
DESERT VIEW POWER
MARCH 27, 2018

Data From:	1-RA-U2	2-RA-U2	3-RA-U2
Date:	3/27/2018	3/27/2018	3/27/2018
Time:	8:30	9:54	11:32

Test No.	1-Compliance –U2	2-Compliance-U2	3-Compliance-U2	Average
O_2, %	8.6	8.4	8.6	8.5
CO_2, %	12.0	12.2	12.0	12.1
H_2O, %	12.25	12.56	11.91	12.24
Stack Temperature, °F	348	347	347	347
Gas Flow:				
wacfm	159,704	162,944	166,663	163,104
dscfm	92,606	94,204	97,074	94,628
NO_x ppm	33.1	34.1	34.5	**33.9**
NO_x ppm @ 3% O_2	47.9	48.9	50.2	**49.03**
NO_x lb/hr	21.93	23.01	23.97	**22.97**
CO ppm	0.18	0.17	0.17	**0.18**
CO ppm @ 3% O_2	0.27	0.25	0.25	**0.25**
CO lb/hr	0.07	0.07	0.07	**0.07**
SO_x ppm	6.05	7.65	8.05	**7.25**
SO_x ppm @ 3% O_2	8.77	10.97	11.73	**10.49**

SO_x ppm @ 3% O_2				**10.49**
SO_x lb/hr	5.58	7.18	7.79	**6.85**

Summary of Emissions Results Unit 2

TABLE 1-2
SUMMARY OF EMISSIONS RESULTS UNIT 2
DESERT VIEW POWER
MARCH 27, 2018

Parameter	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	22.72		
lb/hr (as HCl)	8.00		
lb/MMBtu	0.0206	0.022	Pass
Total Solid Particulate:			
gr/dscf	0.0002	--	
gr/dscf @ 12% CO_2	0.0002	0.010	Pass
lb/hr	0.13	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	10.49	27	Pass
lb/hr	6.85	12	Pass
NO_x:			
ppm at 3% O_2	49.03	94	Pass
lb/hr	22.97	30	Pass
CO:			
ppm @ 3% O_2	0.25	231	Pass
lb/hr	0.07	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	3.14		
lb/hr	0.51	5.9	Pass

Note: NO_x CO and SO_2 results are from RATA Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Particulate Emissions Performance Test Unit 1

TABLE 4-2
PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
MARCH 30 AND 31, 2018

Date:	3/30/2018	3/31/2018	3/31/2018
Time:	1729/1940	755/1005	1040/1250

Test No.	2-PM-U1	3-PM-U1	4-PM-U1	Average
O_2, %	8.6	9.1	9.0	8.9
CO_2, %	11.9	12.4	12.5	12.3
H_2O, %	12.6%	13.3%	12.1%	12.6%
Stack Temperature (°F)	351.0	340.7	346.3	346.0
Gas Flow:				
wacfm	160,555	164,151	166,422	163,709
dscfm	91,807	94,349	96,256	94,137
Isokinetic Ratio, %	101.4	99.6	100.2	100.4
Total Solid Particulate:				
Grain Loading, gr/dscf	0.0017	0.0026	0.0023	0.0022
Grain Loading @ 12% CO_2	0.0017	0.0026	0.0022	0.0022
lb/hr	1.34	2.14	1.89	1.79

Note: Test 1-PM-U1 was not used since sample was lost during the post-test recovery.

Hydrocarbon Emissions Performance Test Unit 1

TABLE 4-4
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
MARCH 29, 2018

Date:	3/29/2018	3/29/2018
Time:	946/1033	946/1033

Test No.	1A-HC-U1	1B-HC-U1	Average
O_2, %	9.09	9.09	9.09
CO_2, %	11.34	11.34	11.34
H_2O, %	13.03%	13.03%	13.03%
Gas Flow:			
wacfm	170,584	170,584	170,584
dscfm	97,064	97,064	97,064
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	2.06	2.04	2.05
TNMHC ppm @ 3% O_2	3.13	3.09	3.11
TNMHC, lb/hr	0.50	0.49	0.50

Note: Flow rates from HCL Run 1

Particulate Emissions Performance Test Unit 2

TABLE 4-16

PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
MARCH 27-28, 2018

Date:	3/27/2018	3/27/2018	3/28/2018
Time:	830/1104	1132/1404	801/1031

Test No.	1-PM-U2	2-PM-U2	3-PM-U2	Average
O_2 (%)	8.5	8.5	8.4	8.5
CO_2 (%)	12.1	12.1	12.3	12.2
H_2O%	12.1%	12.0%	12.3%	12.1%
Stack Temperature (°F)	346.7	349.2	345.5	347.1
Gas Flow				
wacfm	161,468	164,997	166,570	164,345
dscfm	93,881	95,711	96,745	95,446
Isokinetic Ratio (%)	96.1	98.9	98.9	98.0
Total Solid Particulate				
Grain Loading, gr/dscf	0.0002	0.0003	0.0000	0.0002
Grain Loading @ 12% CO_2	0.0002	0.0003	0.0000	0.0002
lb/hr	0.15	0.23	0.00	0.13

Hydrocarbon Emissions Performance Test Unit 2

TABLE 4-18
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
MARCH 27, 2018

Date:	3/27/2018	3/27/2018
Time:	954/1037	954/1037

Test No.	1A-HC-U2	1B-HC-U2	Average
O_2, %	8.49	8.49	8.49
CO_2, %	12.07	12.07	12.07
H_2O, %	12.09%	12.09%	12.09%
Gas Flow:			
wacfm	161,468	161,468	161,468
dscfm	93,881	93,881	93,881
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	2.06	2.29	2.18
TNMHC ppm @ 3% O_2	2.98	3.30	3.14
TNMHC, lb/hr	0.48	0.54	0.51

Note: Flow rates from PM Run 1, the higher of the two runs was used to demonstrate compliance since the difference of the individual results was >20% of the average result per SCAQMD Method 25.3.

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Summary of Emissions Results Unit 1

TABLE 1-1
SUMMARY OF EMISSIONS RESULTS UNIT 1
DESERT VIEW POWER
MARCH 19, 22, 2019

Parameter	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	17.65		
lb/hr (as HCl)	6.37		
lb/MMBtu	0.0171	0.022	Pass
Total Solid Particulate:			
gr/dscf	0.0009	--	
gr/dscf @ 12% CO_2	0.0009	0.010	Pass
lb/hr (PM_{10})	0.73	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	7.00	27	Pass
lb/hr	4.67	12	Pass
NO_x:			
ppm at 3% O_2	42.65	94	Pass
lb/hr	20.44	30	Pass
CO:			
ppm @ 3% O_2	0.00	231	Pass
lb/hr	0.00	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	18.38		
lb/hr	3.04	5.9	Pass

Note: NO_x CO and SO_2 results are from compliance Runs 1, 3 and 4. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used. The higher of the two runs was used to demonstrate compliance since the difference of the individual results was >20% of the average result per SCAQMD Method 25.3.

Hydrochloric Acid Tests Results Unit 1

4.0 RESULTS

This section presents the results of the performance tests conducted at Desert View Power, during March of 2019. Test results are presented in the following sections:

4.1 Unit 1 Performance Tests and RATA Results
4.2 Unit 2 Performance Tests and RATA Results
4.3 Fuel Analysis Results

All supporting data sheets, CEM data, instrument strip charts, and plant data are included in Appendix A. Laboratory reports and sample chain of custody records are contained in Appendix B. Emissions and Load calculations are presented in Appendix C. Quality assurance information is contained in Appendix D. The test plan that was submitted and is contained in Appendix E.

4.1 UNIT 1 PERFORMANCE TESTS AND RATA RESULTS

The results of the HCL testing are presented in Table 4-1. HCL emissions for Unit 1 were 0.0171 lb/MMBtu. This is below the permit limit of 0.022 lb/MMBtu. The results of the total solid particulate testing are presented in Table 4-2. Total solid particulate emissions for Unit 1 were 0.73 lb/hr. This is below the permit limit of 3.9 lb/hr. Gaseous emissions results are presented in Tables 4-3, and 4-4. NO_x, CO, SO_2 and hydrocarbon emissions results were below established permit limits. Results from the hydrocarbon tests can be found in Appendix C.1.5.1 and C.1.5.2.

Tables 4-5 through 4-14 present the CEMS RATA for Unit 1. The results demonstrate that the CEMS for Unit 1 is in control as defined in CFR 40 Appendix F. The results of the RATA are presented in units of ppm dry, ppm @ 3% O_2, and lb/hr for NO_x, CO and SO_2. O_2 results are

presented in units of ppm dry, ppm @ 3% O_2, and lb/hr for NO_x, CO and SO_2. O_2 results are presented in concentration units of %.

TABLE 4-1
HYDROCHLORIC ACID TEST RESULTS UNIT 1
DESERT VIEW POWER
MARCH 19, 2016

Test Number	1-HCL-U1	2-HCL-U1	3-HCL-U1	Average	Limit
Date	03/19/19	03/19/19	03/19/19		
Start/Stop Time	725/1040	1101/1322	1337/1547		
Stack Flow Rate, dscfm	98,598	94,633	96,126	96,452	
Sample Volume, dscf	98.204	96.125	96.933	97.087	
O_2, %	8.85	8.34	8.40	8.53	
CO_2, %	11.77	12.24	12.21	12.08	
mg/sample	46.0	50.8	48.7	48.5	
mg/dscm	16.54	18.66	17.74	17.65	
ppm (as HCl)	10.90	12.30	11.69	11.63	
lb/hr (as HCl)	6.10	6.61	6.38	6.37	
MMBtu/Hr	373	373	373	373	
lb/MMBtu	0.016	0.018	0.017	0.0171	0.022

NOx, CO, SOx Emissions Performance Tests Unit 1

TABLE 4-3
NO_x, CO, SO_x EMISSIONS PERFORMANCE TESTS UNIT 1
DESERT VIEW POWER
MARCH 19, 2019

Data From:	1-NO_x, CO, SO_2-U1	3-NO_x, CO, SO_2-U1	4-NO_x, CO, SO_2-U1
Date:	3/19/2019	3/19/2019	3/19/2019
Time:	8:20	11:01	12:17

Test No.	1-Compliance -U1	2-Compliance-U1	3-Compliance-U1	Average
O_2, %	8.4	8.4	8.3	8.3
CO_2, %	12.2	12.2	12.3	12.2
H_2O, %	14.81	16.27	14.81	15.30
Stack Temperature, °F	354	368	369	364
Gas Flow:				
wacfm	175,107	176,706	172,983	174,932
dscfm	97,184	94,623	94,215	95,341
NO_x ppm	28.7	30.9	30.3	29.9
NO_x ppm @ 3% O_2	41.0	44.0	42.9	42.65
NO_x lb/hr	19.99	20.92	20.43	20.44
CO ppm	-0.01	0.00	-0.03	-0.01
CO ppm @ 3% O_2	-0.01	0.00	-0.04	-0.02
CO lb/hr	0.00	0.00	-0.01	0.00
SO_x ppm	4.36	4.42	5.96	4.92
SO_x ppm @ 3% O_2	6.23	6.31	8.45	7.00
SO_x lb/hr	4.23	4.17	5.60	4.67

Hydrochloric Acid Tests Results Unit 2

4.2 UNIT 2 PERFORMANCE TESTS AND RATA RESULTS

The results of the HCL testing are presented in Table 4-15. HCL emissions for Unit 1 were xxxx lb/MMBtu. This is below the permit limit of 0.022 lb/MMBtu. The results of the total solid particulate testing are presented in Table 4-16. Total solid particulate emissions for Unit 2 were 0.34 lb/hr. This is below the permit limit of 3.9 lb/hr. Gaseous emissions results are presented in Tables 4-17, and 4-18. NO_x, CO, SO_2 and hydrocarbon emissions results were also below established permit limits.

Tables 4-19 through 4-28 present the CEMS RATA results for Unit 2. The results demonstrate that the CEMS for Unit 2 is in control as defined in CFR 40 Appendix F. The results of the RATA are presented in units of ppm dry, ppm @ 3% O_2 and lb/hr for NO_x, CO and SO_2. O_2 results are presented in concentration units of %.

TABLE 4-15
HYDROCHLORIC ACID TEST RESULTS UNIT 2
DESERT VIEW POWER
MARCH 21, 2019

Test Number	1-HCL-U2	2-HCL-U2	3-HCL-U2	Average	Limit
Date	3/21/2019	3/21/2019	3/21/2019		
Start/Stop Time	721/940	1010/1242	1306/1518		
Stack Flow Rate, dscfm	91,901	87,807	87,054	88,921	
Sample Volume, dscf	89.534	88.014	87.764	88.437	
O_2, %	7.66	7.61	8.42	7.90	
CO_2, %	12.98	13.00	12.22	12.73	
mg/sample	40.5	62.5	67.3	56.8	
mg/dscm	15.97	25.07	27.08	22.71	
ppm (as HCl)	10.53	16.53	17.85	14.97	
lb/hr (as HCl)	5.49	8.24	8.82	7.52	
MMBtu/Hr	379	379	379	379	
lb/MMBtu	0.014	0.022	0.023	0.0198	0.022

NOx, CO, SOx, Emissions Performance Test Unit 2

TABLE 4-17
NO_X, CO, SO_X EMISSIONS PERFORMANCE TESTS UNIT 2
DESERT VIEW POWER
MARCH 21, 2019

Data From:	1-RA-U2	2-RA-U2	3-RA-U2
Date:	3/21/2019	3/21/2019	3/21/2019
Time:	7:21	8:36	10:10

Test No.	1-Compliance –U2	2-Compliance-U2	3-Compliance-U2	Average
O_2 (%)	7.7	7.7	7.7	7.7
CO_2 (%)	13.0	13.0	12.9	13.0
H_2O%	15.8	15.8	15.4	15.7
Stack Temperature (°F)	355	355	356	355.2
Gas Flow				
wacfm	165,283	162,666	157,875	161,941
dscfm	90,919	89,368	87,096	89,128

SO_x ppm	10.6	9.5	9.4	9.83
SO_x ppm @ 3% O_2	14.3	12.8	12.7	13.28
SO_x lb/hr	9.57	8.45	8.19	8.73
NO_x ppm	41.08	42.10	41.86	41.68
NO_x ppm @ 3% O_2	55.54	56.93	56.55	56.34
NO_x lb/hr	26.76	26.95	26.11	26.61
CO ppm	0.00	0.00	0.00	0.00
CO ppm @ 3% O_2	0.00	0.00	0.00	0.00
CO lb/hr	0.00	0.00	0.00	0.00

Summary of Emissions Results Unit 2

TABLE 1-2
SUMMARY OF EMISSIONS RESULTS UNIT 2
DESERT VIEW POWER
MARCH 21, 2019

Parameter	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	22.71		
lb/hr (as HCl)	7.52		
lb/MMBtu	0.0198	0.022	Pass
Total Solid Particulate:			
gr/dscf	0.0004	--	
gr/dscf @ 12% CO_2	0.0004	0.010	Pass
lb/hr	0.34	3.9	Pass
Sulfur Dioxide:			
ppm @ 3% O_2	13.28	27	Pass
lb/hr	8.73	12	Pass
NO_x:			
ppm at 3% O_2	56.34	94	Pass
lb/hr	26.61	30	Pass
CO:			
ppm @ 3% O_2	0.00	231	Pass
lb/hr	0.00	13	Pass
Hydrocarbons:			
ppm @ 3% O_2	2.47		
lb/hr	0.41	5.9	Pass

Note: NO_x CO and SO_2 results are from NO_x CO and SO_2 Runs 1, 3 and 4. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Particulate Emissions Performance Test Unit 1

TABLE 4-2
PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
MARCH 22, 2019

Date:	3/22/2019	3/22/2019	3/22/2019	
Time:	638/848	901/1111	1126/1336	
Test No.	**1-PM-U1**	**2-PM-U1**	**3-PM-U1**	**Average**
O_2, %	8.4	8.0	8.3	8.2
CO_2, %	12.2	12.0	12.3	12.2
H_2O, %	14.5%	14.5%	13.7%	14.2%
Stack Temperature (°F)	346.5	351.6	354.3	350.8
Gas Flow:				
wacfm	173,022	171,612	172,178	172,270
dscfm	97,926	96,438	97,372	97,245
Isokinetic Ratio, %	101.2	101.8	100.8	101.3
Total Solid Particulate:				
Grain Loading, gr/dscf	0.0008	0.0011	0.0007	0.0009
Grain Loading @ 12% CO_2	0.0008	0.0011	0.0007	0.0009
lb/hr	0.66	0.93	0.60	0.73

Hydrocarbon Emissions Performance Test Unit 1

TABLE 4-4
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
MARCH 19, 2019

Date:	3/19/2019	3/19/2019
Time:	946/1033	946/1033

Test No.	1A-HC-U1	1B-HC-U1	Average
O_2, %	8.85	8.85	8.85
CO_2, %	11.77	11.77	11.77
H_2O, %	14.88%	14.88%	14.88%
Gas Flow:			
wacfm	178,572	178,572	178,572
dscfm	98,598	98,598	98,598
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	2.47	12.37	7.42
TNMHC ppm @ 3% O_2	3.66	18.38	11.02
TNMHC, lb/hr	0.61	3.04	1.82

Note: Flow rates from HCL Run 1. The higher of the two runs was used to demonstrate compliance since the difference of the individual results was >20% of the average result per SCAQMD Method 25.3.

Particulate Emissions Performance Test Unit 2

TABLE 4-16
PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
MARCH 21, 2019

Date:	3/21/2019	3/21/2019	3/28/2018	
Time:	721/940	1010/1242	1306/1518	
Test No.	**1-PM-U2**	**2-PM-U2**	**3-PM-U2**	**Average**
O_2 (%)	7.7	7.6	8.4	7.9
CO_2 (%)	13.0	13.0	12.2	12.7
H_2O%	14.6%	14.9%	15.0%	14.8%
Stack Temperature (°F)	353.7	358.0	366.0	359.3
Gas Flow				
wacfm	162,809	163,052	164,441	163,434
dscfm	90,907	90,239	90,043	90,396
Isokinetic Ratio (%)	102.8	103.1	101.0	102.3
Total Solid Particulate				
Grain Loading, gr/dscf	0.0002	0.0002	0.0010	0.0004
Grain Loading @ 12% CO_2	0.0002	0.0001	0.0010	0.0004
lb/hr	0.14	0.12	0.76	0.34

Hydrocarbon Emissions Performance Test Unit 2

TABLE 4-18
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
MARCH 21, 2019

Date:	3/21/2019	3/21/2019	
Time:	954/1037	954/1037	
Test No.	**1A-HC-U2**	**1B-HC-U2**	**Average**
O_2, %	7.66	7.66	7.66
CO_2, %	12.98	12.98	12.98
H_2O, %	14.58%	14.58%	14.58%
Gas Flow:			
wacfm	162,809	162,809	162,809
dscfm	90,907	90,907	90,907
EPA Correction Factor	1.086	1.086	1.086
TNMHC ppm	1.86	1.80	1.83

TNMHC ppm	1.66	1.60	1.63
TNMHC ppm @ 3% O_2	2.51	2.44	2.47
TNMHC, lb/hr	0.42	0.41	0.41

Note: Flow rates from PM Run 1

Summary Of Results

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1.0 INTRODUCTION

Montrose Air Quality Services, LLC (MAQS) was contracted by Desert View Power, to conduct informational particulate <10 microns, testing at the Desert View Power Project, Unit 2 located in Mecca, California. The testing was performed to assist in the correlation of stack opacity measurement to particulate matter less than 10 microns. Testing was conducted on May 1, 2019. The MAQS test team consisted of Dave Wonderly and Robert Howard. Kevin Lawrence of Desert View Power, coordinated plant operations and data retrieval during the test program.

Measurement of filterable particulate was performed using EPA Method 201A.

Tables 1-1 summarize the results of the emissions tests.

TABLE 1-1
SUMMARY OF RESULTS
DESERT VIEW POWER UNIT 2
MAY 1, 2019

Parameter	1-PM_{10}	2-PM_{10}	3-PM_{10}	Average
PM_{10} Catch, mg	0.100	3.000	3.300	2.133
Mass Emissions, lb/hr	0.019	0.553	0.584	0.385
PM_{10} Filterable Catch, mg	0.000	0.000	0.600	0.200
Mass Emissions, lb/hr	0.000	0.000	0.106	0.035
Average Opacity%	2.82	3.00	2.71	2.84

Results / Unit 2 PM10 Test Results

4.0 RESULTS

This section presents the results of the PM_{10} testing.

All supporting data sheets, CEM data, instrument strip charts, and plant data are included in Appendix A. Laboratory reports and sample chain of custody records are contained in Appendix B. Quality assurance information is contained in Appendix D.

4.1 UNIT 2 PM_{10} TEST RESULTS

TABLE 4-1
PM_{10} TEST RESULTS
DESERT VIEW POWER UNIT 2
MAY 1, 2019

Parameter	1-PM_{10}	2-PM_{10}	3-PM_{10}
Date	5/1/2019	5/1/2019	5/1/2019
Start Time	6:32:00	10:08:00	13:31:00
Stop Time	9:43:15	13:10:00	16:46:15
Stack Gas Velocity (ft/sec)	68.99	67.05	69.97
Stack Temperature (°F)	328.0	343.8	350.6
Moisture Fraction	13.35%	13.23%	12.82%
Stack Flow Rate (wacfm)	160,782	156,244	163,066
Stack Flow Rate (dscfm)	93,764	89,510	93,016
Stack O_2 (%)	8.40	8.62	8.48
Stack CO_2 (%)	12.28	12.04	12.22
PM_{10} Catch, mg	0.1	3.0	3.3
Grain Loading, gr/dscf	0.00002	0.00072	0.00073
Grain Loading @ 3% O_2	0.00003	0.00105	0.00106
Mass Emissions, lb/hr	0.019	0.553	0.584
PM_{10} Filterable Catch, mg	0.0	0.0	0.6
Grain Loading, gr/dscf	0.00000	0.00000	0.00013
Grain Loading @ 3% O_2	0.00000	0.00000	0.00019
Mass Emissions, lb/hr	0.000	0.000	0.106
Total Particulate lb/hr	0.019	0.553	0.691
Total Particulate PM_{10} lb/hr	0.000	0.000	0.106
Opacity %	2.82	3.00	2.71

Summary of Emissions Results Unit 1

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TABLE 1-1
SUMMARY OF EMISSIONS RESULTS UNIT 1
DESERT VIEW POWER
JUNE 2, 2020

Parameter/Units	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	28.20		
lb/hr (as HCl)	9.47		
lb/MMBtu	0.0248	0.022	Fail
Total Solid Particulate			
gr/dscf	0.0001	--	
gr/dscf @ 12% CO_2	0.0001	0.010	Pass
lb/hr (PM_{10})	0.07	3.9	Pass
Sulfur Dioxide			
ppm @ 3% O_2	14.40	27	Pass
lb/hr	9.21	12	Pass
NO_x			
ppm at 3% O_2	62.80	94	Pass
lb/hr	28.91	30	Pass
CO			
ppm @ 3% O_2	0.11	231	Pass
lb/hr	0.03	13	Pass
Hydrocarbons			
ppm @ 3% O_2	2.67		
lb/hr	0.43	5.9	Pass

Note: NO_x, CO, and SO_2 results are from compliance Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Particulate Emissions Performance Test Unit 1

TABLE 4-2
PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
JUNE 2, 2020

Parameter/Units	1-PM-U1	2-PM-U1	3-PM-U1	Average
Date	6/2/2020	6/2/2020	6/2/2020	
Time	620/839	910/1132	1204/1426	
O_2, %	8.2	8.1	8.1	8.1
CO_2, %	12.3	12.3	12.2	12.3
H_2O, %	13.5%	13.7%	13.3%	13.5%
Stack Temperature, °F	392.4	392.2	393.4	392.7
Gas Flow				
wacfm	170,913	171,227	174,754	172,298
dscfm	91,665	91,550	93,764	92,326
Isokinetic Ratio, %	101.9	101.0	100.0	101.0

Isokinetic Ratio, %	101.9	101.0	100.0	101.0
Total Solid Particulate				
Grain Loading, gr/dscf	0.00011	0.00003	0.00013	0.00009
Grain Loading @ 12% CO_2	0.00011	0.00003	0.00013	0.00009
lb/hr	0.09	0.03	0.10	0.07

NOx, CO, SOx, Emissions Performance Tests Unit 1

TABLE 4-3
NO_X, CO, SO_X EMISSIONS PERFORMANCE TESTS UNIT 1
DESERT VIEW POWER
JUNE 2, 2020

Parameter/Units	1-U1	2-U1	3-U1	Average
Date	6/2/2020	6/2/2020	6/2/2020	
Time	6:20	9:10	12:04	
O_2, %	8.2	8.2	8.2	8.2
CO_2, %	12.3	12.4	12.3	12.3
H_2O, %	14.66	14.18	14.89	14.58
Stack Temperature, °F	384	389	388	387
Gas Flow				
wacfm	169,000	170,626	169,510	169,712
dscfm	90,288	91,148	89,850	90,429
NO_x				
ppm	44.0	44.5	45.4	**44.6**
ppm @ 3% O_2	62.2	62.5	63.8	**62.80**
lb/hr	28.46	29.05	29.22	**28.91**
CO				
ppm	0.05	0.04	0.13	**0.08**
ppm @ 3% O_2	0.07	0.06	0.19	**0.11**
lb/hr	0.02	0.02	0.05	**0.03**
SO_x				
ppm	11.71	7.62	11.37	**10.23**
ppm @ 3% O2	16.54	10.70	15.97	**14.40**
lb/hr	10.53	6.92	10.18	**9.21**

Results are from runs 1, 2 and 3

Hydrochloric Acid Tests Results Unit 2

4.2 UNIT 2 PERFORMANCE TEST RESULTS

The results of the HCL testing are presented in Table 4-5. HCL emissions for Unit 2 were 0.0481 lb/MMBtu. This is above the permit limit of 0.022 lb/MMBtu. The results of the total solid particulate testing are presented in Table 4-6. Total solid particulate emissions for Unit 2 were 0.05 lb/hr. This is below the permit limit of 3.9 lb/hr. Gaseous emissions results are presented in Tables 4-7, and 4-8. NO_x, CO, SO_2 and hydrocarbon emissions results were also below established permit limits.

TABLE 4-5
HYDROCHLORIC ACID TEST RESULTS UNIT 2
DESERT VIEW POWER
JUNE 3, 2020

Parameter/Units	1-HCL-U2	2-HCL-U2	3-HCL-U2	Average	Limit
Date	6/3/2020	6/3/2020	6/3/2020		
Start/Stop Time	617/837	910/1140	1211/1428		
Stack Flow Rate, dscfm	90,944	89,825	91,133	90,634	
Sample Volume, dscf	95.049	93.178	94.765	94.330	
O_2, %	7.87	7.87	7.70	7.81	
CO_2, %	12.61	12.61	12.69	12.64	
HCl					
mg/sample	130.0	146.0	160.0	145.3	
mg/dscm	48.29	55.33	59.62	54.41	
ppm (as HCl)	31.84	36.47	39.30	35.87	
lb/hr (as HCl)	16.44	18.60	20.34	18.46	
MMBtu/Hr	384	384	384	384	
lb/MMBtu	0.043	0.048	0.053	0.0481	0.022

NOx, CO, SOx Emissions Performance Test Unit 2

TABLE 4-7
NO_X, CO, SO_X EMISSIONS PERFORMANCE TESTS UNIT 2
DESERT VIEW POWER
JUNE 3, 2020

Parameter/Units	2A-U2	2B-U2	3-U2	
Date	6/3/2020	6/3/2020	6/3/2020	
Time	9:10	10:33	12:11	Average
O_2, %	7.9	7.8	7.7	7.8
CO_2, %	12.6	12.6	12.7	12.7
H_2O, %	15.87	15.57	16.35	15.93
Stack Temperature, °F	387	386	389	387
Gas Flow				
wacfm	170,813	170,932	171,177	170,974
dscfm	89,517	89,974	88,960	89,484

NO_x				
ppm	37.7	39.8	43.2	**40.2**
ppm @ 3% O_2	51.8	54.4	58.7	**55.00**
lb/hr	24.18	25.65	27.55	**25.79**
CO				
ppm	0.09	0.08	0.14	**0.11**
ppm @ 3% O_2	0.13	0.12	0.19	**0.15**
lb/hr	0.04	0.03	0.06	**0.04**
SO_x				
ppm	10.47	10.66	11.93	**11.02**
ppm @ 3% O_2	14.38	14.59	16.21	**15.06**
lb/hr	9.34	9.56	10.58	**9.83**

Results are from runs 2A, 2B and 3. Run 1 was not used due to bad sample recovery

Summary of Emissions Results Unit 2

TABLE 1-2
SUMMARY OF EMISSIONS RESULTS UNIT 2
DESERT VIEW POWER
JUNE 3, 2020

Parameter/Units	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	54.41		
lb/hr (as HCl)	18.46		
lb/MMBtu	0.0481	0.022	Fail
Total Solid Particulate			
gr/dscf	0.0001	--	
gr/dscf @ 12% CO_2	0.0001	0.010	Pass
lb/hr	0.05	3.9	Pass
Sulfur Dioxide			
ppm @ 3% O_2	15.06	27	Pass
lb/hr	9.83	12	Pass
NO_x			
ppm at 3% O_2	55.00	94	Pass
lb/hr	25.79	30	Pass
CO			
ppm @ 3% O_2	0.15	231	Pass
lb/hr	0.04	13	Pass
Hydrocarbons			
ppm @ 3% O_2	2.54		
lb/hr	0.42	5.9	Pass

Note: NO_x, CO, and SO_2 results are from NO_x CO and SO_2 Runs 2A, 2B, and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.

Hydrochloric Acid Test Results Unit 1

4.0 TEST RESULTS

This section presents the results of the performance tests conducted at Desert View Power, during June of 2020. Test results are presented in the following sections:

- 4.1 Unit 1 Performance Test Results
- 4.2 Unit 2 Performance Test Results
- 4.3 Fuel Analysis Results

All supporting data sheets, CEM data, instrument strip charts, laboratory data, chain of custody records, and quality assurance data are included in Appendix A. Plant data are contained in Appendix B. Emissions and Load calculations are presented in Appendix C. Quality assurance information is contained in Appendix D. The test plan that was submitted and is contained in Appendix E.

4.1 UNIT 1 PERFORMANCE TEST RESULTS

The results of the HCL testing are presented in Table 4-1. HCL emissions for Unit 1 were 0.0248 lb/MMBtu. This is above the permit limit of 0.022 lb/MMBtu. The results of the total solid particulate testing are presented in Table 4-2. Total solid particulate emissions for Unit 1 were 0.07 lb/hr. This is below the permit limit of 3.9 lb/hr. Gaseous emissions results are presented in Tables 4-3, and 4-4. NO_x, CO, SO_2 and hydrocarbon emissions results were below established permit limits. Results from the hydrocarbon tests can be found in Appendix C.1.5.1 and C.1.5.2.

TABLE 4-1
HYDROCHLORIC ACID TEST RESULTS UNIT 1
DESERT VIEW POWER
JUNE 2, 2020

Test Number	1-HCL-U1	2-HCL-U1	3-HCL-U1	Average	Limit
Date	06/02/20	06/02/20	06/02/20		
Start/Stop Time	620/839	910/1132	1204/1426		
Stack Flow Rate, dscfm	89,373	89,807	89,840	89,673	
Sample Volume, dscf	92.006	92.865	92.747	92.539	
O_2, %	8.23	8.13	8.08	8.15	
CO_2, %	12.31	12.33	12.20	12.28	
HCl					
mg/sample	62.4	78.2	81.2	73.9	
mg/dscm	23.95	29.73	30.91	28.20	
ppm (as HCl)	15.79	19.60	20.38	18.59	
lb/hr (as HCl)	8.01	9.99	10.39	9.47	
MMBtu/Hr	381	381	381	381	
lb/MMBtu	0.021	0.026	0.027	0.0248	0.022

Hydrocarbon Emissions Performance Test Unit 1

Desert View Power
2020 Emissions Performance Test

TABLE 4-4
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
JUNE 2, 2020

Parameter/Units	1A-VOC-U1	1B-VOC-U1	Average
Date	6/2/2020	6/2/2020	
Time	651/732	651/732	
O_2, %	8.23	8.23	8.23
CO_2, %	12.31	12.31	12.31
H_2O, %	13.45%	13.45%	13.45%
Gas Flow			
wacfm	170,913	170,913	170,913
dscfm	91,665	91,665	91,665
EPA Correction Factor	1.086	1.086	1.086
TNMHC	1.93	1.85	1.89
ppm			
ppm @ 3% O_2	2.73	2.61	2.67
lb/hr	0.44	0.42	0.43

Note: Flow rates from PM Run 1

Particulate Emissions Performance Test Unit 2

TABLE 4-6
PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
JUNE 3, 2020

Parameter/Units	1-PM-U2	2-PM-U2	3-PM-U2	Average
Date	6/3/2020	6/3/2020	6/3/2020	
Time	617/837	910/1140	1211/1428	
O_2, %	7.9	7.9	7.7	7.8
CO_2, %	12.6	12.6	12.7	12.6
H_2O, %	14.6%	14.3%	14.4%	14.4%
Stack Temperature, °F	392.2	391.0	392.5	391.9
Gas Flow				
wacfm	173,107	174,274	171,278	172,886
dscfm	91,523	92,531	90,702	91,585
Isokinetic Ratio, %	100.3	99.5	100.3	100.0
Total Solid Particulate				
Grain Loading, gr/sdcf	0.00000	0.00018	0.00002	0.00007
Grain Loading @ 12% CO_2	0.00000	0.00017	0.00002	0.00006
lb/hr	0.00	0.14	0.01	0.05

Hydrocarbon Emissions Performance Test Unit 2

TABLE 4-8
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
JUNE 3, 2020

Parameter/Units	1A-VOC-U2	1B-VOC-U2	Average
Date	6/3/2020	6/3/2020	
Time	744/827	744/827	
O_2, %	7.87	7.87	7.87
CO_2, %	12.61	12.61	12.61
H_2O, %	14.56%	14.56%	14.56%
Gas Flow			
wacfm	173,107	173,107	173,107
dscfm	91,523	91,523	91,523
EPA Correction Factor	1.086	1.086	1.086

TNMHC			
ppm	1.78	1.91	1.85
ppm @ 3% O_2	2.45	2.63	2.54
lb/hr	0.41	0.44	0.42

Flow rate from 1-PM-U2

4.3 FUEL ANALYSIS

The fuel sample analysis results are presented in Appendix A.3.5.

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Summary of Emissions Results

1.0 INTRODUCTION

Montrose Air Quality Services, LLC (MAQS) was contracted by Desert View Power, to conduct hydrogen chloride (HCl) performance emissions testing at the Desert View Power Project located in Mecca, California. Testing was conducted on September 9-10, 2020. The MAQS test team consisted of Dave Wonderly, David Hoang, and Patrick Whitman. Dave Wonderly was the on-site Qualified Individual for MAQS. Kevin Lawrence of Desert View Power, coordinated plant operations during the test program. Testing was performed according to the test protocol (MAQS Document Number: W002AS-678786-PP-86) submitted to Desert View Power on January 13, 2020. The South Coast Air Quality Management District (SCAQMD) was notified of the test date but did not send a representative.

The emissions tests included measurements on Unit 1 and Unit 2 for hydrogen chloride (HCl). Exhaust flow rate and moisture measurements were performed in conjunction with the testing.

The Desert View Power Facility met the HCL emissions limits required by the U.S. Environmental Protection Agency 40 CFR Part 63 Subpart DDDDD, the Boiler MACT and the U.S. Environmental Protection Agency Operating Permit NSR 4-4-11;SE 87-01 including amendments through August 14, 2003: 7th Amendment Title V permit to operate CB-OP 99-01 dated 8/1/2000.

Tables 1-1 and 1-2 summarize the results of the HCL emissions tests for Unit 1 and Unit 2.

TABLE 1-1
SUMMARY OF EMISSIONS RESULTS UNIT 1
DESERT VIEW POWER
SETEMBER 10, 2020

Parameter/Units	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	17.92		
lb/hr (as HCl)	6.07		
lb/MMBtu	0.016	0.022	PASS

TABLE 1-2
SUMMARY OF EMISSIONS RESULTS UNIT 2
DESERT VIEW POWER
SEPTEMBER 9, 2020

Parameter/Units	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
mg/dscm	23.99		
lb/hr (as HCl)	8.25		
lb/MMBtu	0.022	0.022	PASS

Unit 2 Performance Test Results / Fuel Analysis

4.2 UNIT 2 PERFORMANCE TEST RESULTS

The results of the HCL testing are presented in Table 4-2. HCL emissions for Unit 2 were 0.022 lb/MMBtu. This is within the permit limit of 0.022 lb/MMBtu.

TABLE 4-2
HYDROCHLORIC ACID TEST RESULTS UNIT 2
DESERT VIEW POWER
SEPTEMBER 9, 2020

Parameter/Units	1-HCL-U2	2-HCL-U2	3-HCL-U2	Average	Limit
Date	9/9/202020	9/9/202020	9/9/202020		
Start/Stop Time	810/1016	1030/1235	1247/1452		
Stack Flow Rate, dscfm	91,692	92,099	91,787	91,859	
Sample Volume, dscf	75.761	76.799	76.385	76.315	
O_2, %	8.66	8.56	8.63	8.61	
CO_2, %	11.79	11.86	11.80	11.82	

HCl					
mg/sample	54.0	44.3	57.2	51.8	
mg/dscm	25.17	20.37	26.44	23.99	
ppm (as HCl)	16.59	13.43	17.43	15.82	
lb/hr (as HCl)	8.64	7.02	9.08	8.25	
MMBtu/Hr	372	372	372	372	
lb/MMBtu	0.023	0.019	0.024	0.022	0.022

4.3 FUEL ANALYSIS

The fuel sample analysis results are presented in Appendix A.3.2.

Test Results / Unit 1 Performance Test Results

4.0 TEST RESULTS

This section presents the results of the performance tests conducted at Desert View Power, during June of 2020. Test results are presented in the following sections:

4.1 Unit 1 Performance Test Results
4.2 Unit 2 Performance Test Results
4.3 Fuel Analysis Results

All supporting data sheets, CEM data, instrument strip charts, laboratory data, chain of custody records, and quality assurance data are included in Appendix A. Plant data are contained in Appendix B. Emissions and Load calculations are presented in Appendix C. Quality assurance information is contained in Appendix D. The test plan that was submitted is contained in Appendix E.

4.1 UNIT 1 PERFORMANCE TEST RESULTS

The results of the HCL testing are presented in Table 4-1. HCL emissions for Unit 1 were 0.016 lb/MMBtu. This is within the permit limit of 0.022 lb/MMBtu.

TABLE 4-1
HYDROCHLORIC ACID TEST RESULTS UNIT 1
DESERT VIEW POWER
SEPTEMBER 10, 2020

Parameter/Units	1-HCL-U1	2-HCL-U1	3-HCL-U1	Average	Limit
Date	09/10/2020	09/10/2020	09/10/2020		
Start/Stop Time	553/758	822/1027	1230/1435		
Stack Flow Rate, dscfm	91,227	90,308	89,830	90,455	
Sample Volume, dscf	75.160	75.081	74.543	74.928	
O_2, %	8.41	8.40	8.34	8.38	
CO_2, %	12.05	12.07	12.10	12.08	
HCl					
mg/sample	39.4	39.4	35.3	38.0	
mg/dscm	18.51	18.53	16.72	17.92	
ppm (as HCl)	12.20	12.21	11.02	11.81	
lb/hr (as HCl)	6.32	6.26	5.62	6.07	
MMBtu/Hr	383	383	383	383	
lb/MMBtu	0.017	0.016	0.015	0.016	0.022

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Summary of Emissions Results Unit 1

TABLE 1-1
SUMMARY OF EMISSIONS RESULTS UNIT 1
DESERT VIEW POWER
MARCH, 2021

Parameter/Units	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
ppmv	12.47		
lb/hr (as HCl)	6.68		
lb/MMBtu	0.019	0.022	Pass
HCL Surrogate Operating Limit (SO_2 ppmc)	19.3		
Total Solid Particulate			
gr/dscf	0.0005	--	
gr/dscf @ 12% CO_2	0.0005	0.006	Pass
lb/hr (PM_{10})	0.40	3.9	Pass
lb/MMBtu	0.0012	0.10	
Sulfur Dioxide			
ppm @ 3% O_2	10.06	27	Pass
lb/hr	6.35	12	Pass
NO_x			
ppm at 3% O_2	54.65	94	Pass
lb/hr	24.77	30	Pass
CO			
ppm @ 3% O_2	0.17	231	Pass
lb/hr	0.05	13	Pass
Hydrocarbons			
ppm @ 3% O_2	6.84		
lb/hr	1.09	5.9	Pass
Mercury			
µg/dscm	10.767		
lb/hr (as Hg)	0.0037		
lb/MMBtu	1.11×10^{-5}	5.7×10^{-6}	Fail

Note: HCL Operating limit is the highest hourly average of SO_2 ppmc recorded during the tests. NO_x, CO, and SO_2 compliance results are from the RATA Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used. The biomass default factor of 9,240 was used.

Hydrochloric Acid Test Results Unit 1

TABLE 4-1
HYDROCHLORIC ACID TEST RESULTS UNIT 1
DESERT VIEW POWER
MARCH 5, 2021

Parameter/Units	1-HCl	2-HCl	3-HCl	Average	Limit
Date	3/5/2021	3/5/2021	3/5/2021		
Start Time	7:20	9:42	12:10		
Stop Time	9:20	11:42	14:10		
Reference Temperature, °F	68	68	68		
Diluent Emissions and Stack Flow Rate					
Moisture Fraction, %	13.1	12.8	14.0	13.3	
O_2, % vol. dry	9.01	9.00	8.92	8.98	
CO_2, % vol. Dry	11.61	11.66	11.72	11.66	
Stack Flow Rate (dscfm)	92,396	93,518	92,706	92,873	
Fuel F_d Factor, dscf/MMBtu @ 68°F	9,240	9,240	9,240		
Fuel F_d Factor, dscf/MMBtu @ 60°F	9,100	9,100	9,100		
HCl Emissions					
ppmvw	12.16	10.28	10.07	10.84	
ppmvd	14.00	11.75	11.66	12.47	
lb/hr (as HCl)	7.5	6.3	6.2	6.68	

lb/MMBtu	0.022	0.018	0.018	0.019	**0.022**

NOx, CO, SOx Emissions Performance Tests Unit 1

TABLE 4-3
NO_x, CO, SO_x EMISSIONS PERFORMANCE TESTS UNIT 1
DESERT VIEW POWER
MARCH 10, 2021

Parameter/Units	1-U1	2-U1	3-U1	Average
Date	3/10/2021	3/10/2021	3/10/2021	
Time	7:46	9:08	10:34	
O_2, %	9.0	9.0	8.9	9.0
CO_2, %	11.7	11.6	11.8	11.7
H_2O, %	14.12	14.71	14.73	14.52
Stack Temperature, °F	358	368	371	366
Gas Flow				
wacfm	168,989	173,350	174,864	172,401
dscfm	94,378	94,992	95,412	94,927
NO_x				
ppm	35.1	34.2	39.9	36.4
ppm @ 3% O_2	53.0	51.6	59.3	54.7
lb/hr	23.75	23.29	27.27	24.77
CO				
ppm	0.12	0.13	0.08	0.11
ppm @ 3% O_2	0.18	0.20	0.12	0.17
lb/hr	0.05	0.06	0.03	0.05
SO_x				
ppm	5.97	6.73	7.41	6.70
ppm @ 3% O_2	9.01	10.15	11.02	10.06
lb/hr	5.61	6.37	7.05	6.35

Note: Results are from RATA Runs 1, 2 and 3

Murcury Emissions Performance Test Unit 1

TABLE 4-5
MERCURY EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
MARCH 11, 2021

Parameter/Units	1-Hg-A	1-Hg-B	2-Hg-A	2-Hg-B	3-Hg-A	3-Hg-B	Averages	Limits
Date	3/11/2021	3/11/2021	3/11/2021	3/11/2021	3/11/2021	3/11/2021		
Start Time	15:25	15:25	16:50	16:50	18:10	18:10		
End Time	16:25	16:25	17:50	17:50	19:10	19:10		
Pre-Test Information								
Fuel F_d Factor, dscf/MMBtu	9,240	9,240	9,240	9,240	9,240	9,240		
Reference Temperature, °F	68	68	68	68	68	68		
Mercury								
Total µg/dscm	8.632	8.588	9.886	10.626	13.477	13.392	10.767	
µg/dscf	0.244	0.243	0.280	0.301	0.382	0.379	0.305	
lb/hr	0.0030	0.0030	0.0034	0.0036	0.0046	0.0046	0.0037	
lb/MMBtu	9.19×10^{-6}	9.15×10^{-6}	1.02×10^{-5}	1.10×10^{-5}	1.37×10^{-5}	1.36×10^{-5}	1.11×10^{-5}	**5.70 x 1**

Particulate Emissions Performance Test Unit 2

TABLE 4-7
PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
MARCH 4, 2021

Parameter/Units	1-PM-U2	2-PM-U2	3-PM-U2	Average
Date	3/4/2021	3/4/2021	3/28/2018	
Time	725/935	955/1200	1225/1430	
O_2, %	8.62	8.70	8.69	8.67
CO_2, %	12.09	12.01	11.97	12.02
H_2O, %	13.1	13.3	12.9	13.1
Stack Temperature, °F	355.2	351.9	353.4	353.49
Gas Flow				
wacfm	162,543	160,033	160,687	161,088
dscfm	92,651	91,402	92,004	92,019
Isokinetic Ratio, %	98.3	101.8	101.2	100.5

Total Solid Particulate				
Grain Loading, gr/dscf	0.00000	0.00045	0.00074	0.00004
Grain Loading @ 12% CO_2	0.00000	0.00045	0.00074	0.00004
lb/hr	0.000	0.351	0.584	0.311
F-Factor, dscf/MMBtu	9,240	9,240	9,240	9,240
Emission Rate, lb/MMBtu	0.0000	0.0010	0.0017	0.0009

Hydrocarbon Emissions Performance Test Unit 2

TABLE 4-9
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
MARCH 8, 2021

Parameter/Units	1A-VOC-U2	1B-VOC-U2	Average
Date	3/8/2021	3/8/2021	
Time	935/1035	935/1035	
O_2, %	8.82	8.82	8.82
CO_2, %	11.87	11.87	11.87
H_2O, %	14.05%	14.05%	0.14
Gas Flow			
wacfm	162,284	162,284	162,284
dscfm	93,659	93,659	93,659
EPA Correction Factor	1.086	1.086	1.086
TNMHC			
ppm	4.79	2.63	3.71
ppm @ 3% O_2	7.10	3.90	5.50
lb/hr	1.12	0.61	0.87

Notes:
Flow rates from RATA Run 2
Per Method 25.3 due to the >20% discrepancy between the paired samples the higher result was used

Summary of Emissions Results Unit 2

TABLE 1-2
SUMMARY OF EMISSIONS RESULTS UNIT 2
DESERT VIEW POWER
MARCH, 2021

Parameter/Units	Average Emission Results	Permit Limit	Comment
Hydrochloric Acid			
ppmv	11.20		
lb/hr (as HCl)	6.79		
lb/MMBtu	0.017	0.022	Pass
HCL Surrogate Operating Limit (SO_2 ppmc)	16.4		
Total Solid Particulate			
gr/dscf	0.0004	--	
gr/dscf @ 12% CO_2	0.0004	0.006	Pass
lb/hr	0.31	3.9	Pass
lb/MMBtu	0.0009	0.10	
Sulfur Dioxide			
ppm @ 3% O_2	12.94	27	Pass
lb/hr	8.15	12	Pass
NO_x			
ppm at 3% O_2	57.88	94	Pass
lb/hr	26.20	30	Pass
CO			
ppm @ 3% O_2	0.20	231	Pass
lb/hr	0.05	13	Pass
Hydrocarbons			
ppm @ 3% O_2	7.10		
lb/hr	1.12	5.9	Pass
Mercury			
µg/dscm	19.653		
lb/hr (as Hg)	0.0065		
lb/MMBtu	2.11×10^{-5}	5.7×10^{-6}	Fail

Note: HCL Operating limit is the highest hourly average of SO_2 recorded ppmc during the tests. NO_x, CO, and SO_2 compliance results are from the RATA Runs 1, 2 and 3. Hydrocarbons are total non-methane hydrocarbons reported as methane. The EPA factor of 1.086 for SCAQMD Method 25.3 was used.
The biomass default factor or 9,240 was used.

Particulate Emissions Performance Test Unit 1

TABLE 4-2
PARTICULATE EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
MARCH 12, 2021

Parameter/Units	1-PM-U1	2-PM-U1	3-PM-U1	Average
Date	3/12/2021	3/12/2021	3/12/2021	
Time	840/1100	1120/1336	1352/1602	
O_2, %	9.12	9.31	9.03	9.15
CO_2, %	11.60	11.38	11.70	11.56
H_2O, %	12.7	13.1	14.2	13.4
Stack Temperature, °F	363.0	362.9	362.6	362.81
Gas Flow				
wacfm	162,912	161,000	162,466	162,126
dscfm	92,202	90,718	90,405	91,108
Isokinetic Ratio, %	99.8	101.3	102.9	101.3

Total Solid Particulate				
Grain Loading, gr/dscf	0.00021	0.00052	0.00079	0.00051
Grain Loading @ 12% CO_2	0.00022	0.00055	0.00081	0.00053
lb/hr	0.165	0.407	0.614	0.395
F-Factor, dscf/MMBtu	9,240	9,240	9,240	9,240
Emission Rate, lb/MMBtu	0.0005	0.0012	0.0018	0.0012

Hydrocarbon Emissions Performance Test Unit 1

TABLE 4-4
HYDROCARBON EMISSIONS PERFORMANCE TEST UNIT 1
DESERT VIEW POWER
MARCH 10, 2021

Parameter/Units	1A-VOC-U1	1B-VOC-U1	Average
Date	3/10/2021	3/10/2021	
Time	1034/1126	1034/1126	
O_2, %	8.86	8.86	8.86
CO_2, %	11.80	11.80	11.80
H_2O, %	14.7	14.7	14.7
Gas Flow			
wacfm	174,864	174,864	174,864
dscfm	95,412	95,412	95,412
EPA Correction Factor	1.086	1.086	1.086
TNMHC			
ppm	4.60	4.60	4.60
ppm @ 3% O_2	6.84	6.84	6.84
lb/hr	1.09	1.09	1.09

Note: Flow rates from RATA Run 3

Hydrochloric Acid Test Results Unit 2

Desert View Power
2021 Emissions Performance Test

4.2 UNIT 2 PERFORMANCE TEST RESULTS

The results of the HCL testing are presented in Table 4-6. HCL emissions for Unit 2 were 0.017 lb/MMBtu. This is above the permit limit of 0.022 lb/MMBtu. The results of the total solid particulate testing are presented in Table 4-7. Total solid particulate emissions for Unit 2 were 0.054 lb/hr. This is below the permit limit of 3.9 lb/hr. Gaseous and hydrocarbon emissions results are presented in Table 4-8, and 4-9. NO_x, CO, SO_2 and hydrocarbon emissions results were also below established permit limits. The results of the Mercury testing are presented in Table 4-10. Mercury emissions for Unit 2 were 2.11E-05 lb/MMBtu. This is above the permit limit of 5.70E-06 lb/MMBtu.

TABLE 4-6
HYDROCHLORIC ACID TEST RESULTS UNIT 2
DESERT VIEW POWER
MARCH 4, 2021

Parameter/Units	1-HCl	2-HCl	3-HCl	Average	Limit
Date	3/4/2021	3/4/2021	3/4/2021		
Start Time	7:25	9:55	12:25		
Stop Time	9:25	11:55	14:25		
Reference Temperature, °F	68	68	68		
Diluent Emissions and Stack Flow Rate					
Moisture Fraction, %	13.10	13.28	12.91	13.1	
O_2, % vol. dry	8.62	8.70	8.69	8.67	
CO_2, % vol. Dry	12.09	12.01	11.97	12.02	
Stack Flow Rate (dscfm)	92,651	91,402	92,004	91,703	
Fuel F_d Factor, dscf/MMBtu @ 68°F	9,240	9,240	9,240	9,240	
Fuel F_d Factor, dscf/MMBtu @ 60°F	9,100	9,100	9,100	9,100	
HCl Emissions					
ppmvw	6.88	11.50	10.81	9.73	
ppmvd	7.92	13.26	12.41	11.20	
lb/hr (as HCl)	4.2	7.0	6.6	6.79	
lb/MMBtu	0.012	0.020	0.019	0.017	**0.022**

NOx, CO, SOx, Emissions Performance Tests Unit 2

TABLE 4-8
NO_x, CO, SO_x EMISSIONS PERFORMANCE TESTS UNIT 2
DESERT VIEW POWER
MARCH 8, 2021

Parameter/Units	1-U2	2-U2	3-U2	Average
Date	3/8/2021	3/8/2021	3/8/2021	
Time	8:20	9:35	10:52	
O_2, %	8.9	8.8	8.8	8.8
CO_2, %	11.8	11.9	11.9	11.9
H_2O, %	14.25	14.06	13.53	13.95
Stack Temperature, °F	331	333	332	332
Gas Flow				
wacfm	163,079	162,287	160,567	161,977
dscfm	94,138	93,651	93,401	93,730
NO_x				
ppm	38.4	39.1	39.6	39.0

ppm @ 3% O_2	57.1	58.0	58.6	57.9
lb/hr	25.89	26.25	26.47	26.20
CO				
ppm	0.13	0.14	0.13	0.13
ppm @ 3% O_2	0.19	0.20	0.19	0.20
lb/hr	0.05	0.06	0.05	0.05
SO_x				
ppm	8.666	8.59	8.92	8.72
ppm @ 3% O_2	12.88	12.73	13.21	12.94
lb/hr	8.13	8.02	8.30	8.15

Note: Results are from RATA Runs 1, 2, and 3.

Murcury Emissions Performance Test Unit 2

TABLE 4-10
MERCURY EMISSIONS PERFORMANCE TEST UNIT 2
DESERT VIEW POWER
MARCH 11, 2021

Parameter/Units	1-Hg-A	1-Hg-B	2-Hg-A	2-Hg-B	3-Hg-A	3-Hg-B	Averages	Limits
Date	3/11/2021	3/11/2021	3/11/2021	3/11/2021	3/11/2021	3/11/2021		
Start Time	10:20	10:20	11:40	11:40	13:15	13:15		
End Time	11:20	11:20	12:40	12:40	14:15	14:15		
Pre-Test Information								
Fuel F_d Factor, dscf/MMBtu	9,240	9,240	9,240	9,240	9,240	9,240		
Reference Temperature, °F	68	68	68	68	68	68		
Mercury								
Total µg/dscm	39.746	37.859	13.598	11.151	8.467	7.099	19.653	
µg/dscf	1.126	1.072	0.385	0.316	0.240	0.201	0.557	
lb/hr	0.0130	0.0124	0.0046	0.0037	0.0028	0.0023	0.0065	
lb/MMBtu	4.26×10^{-5}	4.06×10^{-5}	1.45×10^{-5}	1.19×10^{-5}	9.12×10^{-6}	7.65×10^{-6}	2.11×10^{-5}	**5.70×10^{-6}**

4.3 FUEL ANALYSIS

The fuel sample analysis results were not available at the time of production of this report.